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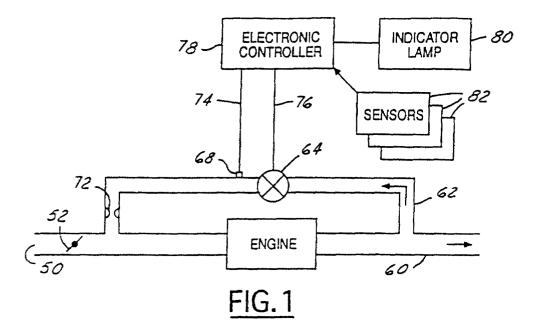
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## (54) Exhaust gas recirculation fault detection system

(57) An engine controller for an automotive engine having an inlet system (50) and an exhaust system (60) includes an EGR valve (64) for permitting exhaust gas to flow from the exhaust system to the inlet system, and an engine controller (78) for operating the EGR valve (64) by closing it from its normal open position. The dif-

ference in exhaust gas pressures in an EGR line downstream of the EGR valve (64) measured during the EGR valve (64) normal open and closed positions is compared with first and second threshold values and the actual pressure with the EGR valve open is compared with a third threshold value to determine whether the EGR system is blocked.





## **EUROPEAN SEARCH REPORT**

**Application Number** EP 00 30 6478

	DOCUMENTS CONSIDE	0.400,000			
Category	Citation of document with in of relevant passa	dication, where appropriate, ages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CI.7)	
P,X	US 6 035 835 A (SHI 14 March 2000 (2000- * column 4, line 1 - * column 9, line 42 figures 1-9 *		F02M25/07		
Y					
Y	26 November 1996 (19	TANI TAKAHIDE ET AL) 996-11-26) - column 12, line 44;			
A	US 5 337 725 A (NAR) 16 August 1994 (1994 * column 4, line 9 - figures 1-5 *	1-08-16)	1,8	TECHNICAL FIELDS SEARCHED (Int.Cl.7)	
A	US 4 164 206 A (TOEI 14 August 1979 (1979 * column 4, line 10 figures 1-4 *		1,8	F02D F02M	
A	PATENT ABSTRACTS OF vol. 1997, no. 01, 31 January 1997 (199 & JP 08 232771 A (St 10 September 1996 (1 * abstract *	97-01-31) UZUKI MOTOR CORP),	1,8		
	The present search report has b	een drawn up for all claims			
Place of search		Date of completion of the search:	Man	Examiner	
X : parti Y : parti docu	THE HAGUE  ATEGORY OF CITED DOCUMENTS  cularly relevant if taken alone cularly relevant if combined with anoth ment of the same category spherical because or	E : earlier patent after the filing er D : document cite L : document cite	ciple underlying the document, but publidate ed in the application d for other reasons	ished on, or	
O: non-	nological background -written disclosure mediate document		e same patent famil		

## ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 00 30 6478

This annex lists the patent family members relating to the patent documents cited in the above–mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

20-07-2001

	Patent document ed in search repo	rt	Publication date		Patent family member(s)	Publication date
US	6035835	Α	14-03-2000	JP	10159661 A	16-06-199
US	5349936	Α	27-09-1994	JP JP DE	2881075 B 6058210 A 4326351 A	12-04-199 01-03-199 10-02-199
US	5577484	Α	26-11-1996	JP	8128360 A	21-05-199
US	5337725	Α	16-08-1994	JP	6229323 A	16-08-199
US	4164206	A	14-08-1979	NONE	*** *** ***	
JP	08232771	Α	10-09-1996	NONE		

FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82